

Claims

1. A method for conveying material, advantageously food-industry bulk material, especially cutting offals or food waste, by means of a pressure difference in a conveying pipe (4), in which method the material is fed to a conveying pipe (4), and further in the conveying pipe to a separator device (5) in which the transferred material is separated from conveying air, in which method underpressure is achieved to the conveying pipe (4) with an ejector apparatus (6) the suction side of which is combined with the separator device (5), which ejector apparatus is operated with an actuating medium, characterised in that liquid mist, especially aqueous liquid mist is utilised as the actuating medium of the ejector apparatus (6).
- 15 2. A method according to claim 1, characterised in that sprayed liquid is collected at least partially and recirculated for spraying.
3. A method according to claim 1 or 2, characterised in that the medium is sprayed, if required, with several nozzles (121, 122, 123).
- 20 4. A method according any one of claims 1–3, characterised in that to the ejector apparatus (6) is brought a second medium, especially a liquidous and/or gaseous medium.
- 25 5. A method according to any one of claims 1–4, characterised in that the second medium is brought to the ejector apparatus (6) along with the actuating medium.
- 30 6. A method according to any one of claims 1–5, characterised in that the second medium is brought regardless of the actuating medium.
- 35 7. A method according to any one of claims 1–6, characterised in that the proportion of the second medium and the actuating medium is regulated when required.
8. A method according to any one of claims 1–7, characterised

in that the second medium is sprayed to the ejector device.

9. A method according to any one of claims 1-8, characterised in that the second medium is sprayed to the ejector device (6) before
5 the mixing of the gases coming from the suction pipe (7) with the actuating medium of the ejector.

10. A method according to any one of claims 1-9, characterised in that the second medium is sprayed to the ejector device (6) during
10 the mixing of the gases of the suction pipe (7) with the actuating medium or after it.

11. A method according to any one of claims 1-10, characterised in that at least a major part of the second
15 medium is separated from the gas flow.

12. A method according to any one of claims 1-11, characterised in that odour and/or particle nuisances are eliminated and/or the suction effect of the ejector apparatus is
20 intensified by bringing the second medium.

13. A method according to any one of claims 1-12, characterised in that as the second medium is utilised a liquidous medium, especially water.

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14. An apparatus for conveying material, advantageously food-industry bulk material, especially cutting offals and food waste, by means of a pressure difference in a conveying pipe (4), which apparatus comprises a conveying pipe (4) for the material, a separator device (5), and a
30 means for achieving underpressure to the conveying pipe (4) with an ejector apparatus (6) the suction side of which is connected to the separator device (5), which ejector apparatus is operated with an actuating medium, characterised in that the ejector apparatus (6) comprises at least one nozzle (121, 122) for spraying liquid mist
35 and utilising as the actuating medium of the ejector and a means (125, 126, 127, 131) for feeding the liquid for the nozzle.

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15. An apparatus according to claim 14, characterised in that the apparatus comprises a collecting means (38) for at least partial collecting of the sprayed medium and a means (131, 126, 125) for re-spraying the collected medium.

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16. An apparatus according to claim 14 or 15, characterised in that at least one of the nozzles (121) is arranged to the suction pipe (7).

10 17. An apparatus according to any one of claims 14–16, characterised in that the apparatus comprises at least one ejector nozzle (122) which is arranged to an ejector pipe (128) or to its vicinity, which ejector pipe is directed at a separator member (38) or extends inside the separator member (38).

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18. An apparatus according to any one of claims 14–17, characterised in that the apparatus comprises a means (123, 130) for feeding a second medium, advantageously a liquidous and/or gaseous medium, especially water, to the ejector apparatus (6).

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19. An apparatus according to any one of claims 14–18, characterised in that the means for bringing the second medium comprises at least one nozzle (123).

25 20. An apparatus according to any one of claims 14–19, characterised in that the means for bringing the second medium comprises at least one nozzle (123) from at least one opening of which the second medium is sprayed to the ejector device (6) by means of the suction produced by the ejector.

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21. An apparatus according to any one of claims 14–20, characterised in that the apparatus comprises a means (38) for separating liquidous and/or solid matter from the gas flow.

35 22. An apparatus according to any one of claims 13–21, characterised in that the apparatus comprises a means for achieving a rotating movement in the separator member (38).